

the Beverton-Holt (1155.17). This sensitivity analysis results in no change of the relative depletion or the exploitation rate; however, there was a significant effect (decrease) in the estimated current biomass and ABC (Table 8).

Emphasis on data sources:

We also conducted a series of runs to investigate the effect of the emphasis for each likelihood component in the baseline model. We set the emphasis at 0.1 and 10 for each component and the results are shown in Table 9. (Note: The emphases presented here were run with version 1.18, prior to all other results presented in this assessment.)

**Post-STAR panel:**

Emphasis on the CPFV survey CPUE index:

The major area of uncertainty the STAR Panel and STAT agreed upon was the bounding scenarios of the baseline model using the CPFV survey CPUE index for a measure of relative abundance, which brings into question the accuracy of abundance trends derived from this series of information. The emphasis on this data source (with associated relative probabilities in parenthesis) was set at 1 (0.22), 5 (0.40) and 10 (0.38), with 5 being the most likely scenario and used in the baseline model. To show this uncertainty, we present the resulting estimates of spawning biomass in Figure 22. (Note: An error in calculation of the CPFV survey CPUE index was discovered during final document preparation. The consequences of this error are explored in Appendix C.)

## STATUS OF THE STOCK AND PROJECTIONS

Considering the results of the baseline model, Table 10 shows the stock projections for the northern California gopher rockfish population, depending on the emphasis used on the CPFV survey CPUE survey (with 5 being most likely and used in the baseline model). The PFMC's harvest policy for rockfish (ABC based on  $F_{50\%}$  harvest rate) was used to forecast harvest in the next 12 years (to the year 2016) and a 40:10 precautionary adjustment did not need to be made. Forecasts were based on an allocation between the commercial and recreational fisheries, 26 and 54 metric tons, respectively. GMT members made this recommendation of using the 5-year average take from 2000-2004 for the commercial fishery and the average take in 2002 and 2004 for the recreational fishery to use in these projections. In this assessment, gopher rockfish, in any scenario, do not appear to be below target levels and the stock appears to be healthy.

### Decision Table Analysis:

Uncertainty in the stock assessment was based on the emphasis used on the CPFV survey CPUE index in the assessment. The emphasis on this data source (with associated relative probabilities in parenthesis) was set at 1 (0.22), 5 (0.40) and 10 (0.38), with 5 being the baseline model. The range of possible management actions to apply to the three states of nature was based on the averages described above. Decision tables with low, medium and high catches associated with each state of nature can be seen in Table 11. There is no evidence of overfishing in any catch scenario when the emphasis of the CPUE index is set at 5 (baseline) or 10, except at the high catch level when the emphasis is 5. The other sign of overfishing is seen in the medium and high catch scenarios, when the CPUE emphasis is set = 1.

Forecasts and decision tables based on  $F_{50\%}$  and California nearshore 60:20 rule can be seen in Appendix D.

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